SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

Q.3 Describe important petrochemical feed stocks & precursors.

Q.4 With reactions and conditions, describe Alkylation and sulphonation.

Q.5 Define and explain the practical utility of aniline point and fire point.

Q.6 Write down ten names of chemicals derived from ethylene and state their uses.

Q.7 With flow sheet diagrams, describe the manufacture of :-

(i) Phenol from cumene and

(ii) Acrylonitrile.

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6th Sem. / Chem. Engg.

Subject : Petrochemicals

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 a) Define Petrochemical.

b) State the function of a refinery.

c) Is there any refinery in haryana? If so, state its name and location.

d) What is meant by feed stock?

e) Define cracking.

f) Name the catalyst used for alkylation.

g) Define smoke point.

h) Out of isoparaffins and cycloparaffins, Which has more octane number?

i) State the role of aromatics in gasolene.

j) State two chemical derived from xylene.

k) Name one chemical derived from acetylene and state its uses.

l) Name two chemicals derived from butanes.

m) What is synthesis gas?

n) Expand BTX.

o) Write down the formulae of styrene and vinyl acetate.

p) State uses of vinyl chloride.

q) Write down the reaction for the manufacture of propylene oxide.

r) Define flash point.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

Q.2 i) Write down the name and location of four big refineries in india.

ii) Write down the name and location of four petrochemical complexes in india.

iii) Give the classification of petroleum refinery products.

iv) Describe thermal cracking.

v) With reactions and conditions, describe reforming.

vi) Differentiate between flash point and fire point.

vii) Explain the practical utility of smoke point. What type of chemicals produce maximum smoke?

viii) Give the name and uses of two chemicals derived from butanes.

ix) Name eight chemicals derived from propylene.

x) Name two chemicals derived from synthesis gas and state their uses.

xi) Name four chemicals derived from benzene and state their uses.

xii) Describe the manufacture of synthesis gas.

xiii) Describe the manufacture of vinyl acetate

xiv) Describe the manufacture of isoprene.

xv) Describe separation of BTX.